THE CHOICE OF EXCHANGE RATE SYSTEM FOR DEVELOPING COUNTRIES

by

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B.A., Xiamen University, Fujian, P.R. of China, 1985

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARTS

Department of Economics

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1988

Approved by:

Major Professor

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ACKNOWLEDGEMENTS

I owe a special debt to my major professor, Dr. E.Wayne Nafziger, for his guidance, help, patience and especially his flexibility during my graduate study. His kindness is most certainly appreciated. I would also express my sincere thanks to Dr. Yangming Chang and Dr. Patrick J Gormely for their helpful comments and criticism.

My deep appreciation goes to the Fujian Provincial Overseas Scholarship Foundation P.R.C. in providing me financial aid for my graduate study in the United States.

I wish to thank my fellow graduate students, especially Chinese graduate students, such as Jin Wang, Shuangyong Tong, Yuhua Du and Qinjian Fu, for their support, encouragement and kindness.

Finally I must acknowledge the continued love and support of my parents. Also I would like to thank in particular the head of Finance and Banking department at Xiamen University of China, Professor Yichun Chang, for his support and encouragement.

The Choice of Exchange Rate System for Developing Countries

1. Introduction

From the World War 2 period until the early 1970s, the major industrial nations operated under a fixed exchange rate system, in which most nation's currencies were linked to the U.S. dollar with a par value while the dollar was pegged to gold. In the early 1970s, since the United states had experienced a high balance of payment deficit and a reduction in her official gold holdings and the convertibility of the dollar had been decreased, the breakdown of the Bretton Woods system occurred. Since then, a wide variety of exchange rate systems has been introduced. Article IV of Amendment 2 to the Fund's Articles of Agreements formally legalized that different types of exchange rate systems can be chosen by countries in terms of their needs. Since a variety of exchange rate arrangements emerged, increasing concern has been given to choose one of the most appropriate exchange rate regime among these systems. Countries could choose a pure floating or a managed floating with various degrees of intervention based on their own economic circumstances and policy objectives. Countries also could seek to peg their curriencies to a particular major currency, an individual basket of curiencies or to the SDR. Because the currencies of the major industrial countries have floated, several studies have

focused on the problem how developing countries should adjust their exchange rate policy. It is these questions that this paper will address.

The paper proceeds as follows. In section 2, I will briefly describe the theory of the choice of an exchange rate regime. In section 3, I will review the principal issues of the choice of exchange rate regime for developing countries. Characteristics of developing countries and the feasibility of floating exchange rates in developing countries will be presented in section 4. In section 5 and 6, I will discuss flexible exchange rate VS. fixed exchange rate and the choice of an appropriate peg, respectively. The conclusion is in section 7.

2. The Choice of An Exchange Rate Regime Theory

The economic characteristics of a country determines what type of exchange rate system it should choose. It is impossible that any one exchange rate system will be suitable to all of the countries which differ in their economic characterestics. Research by Heller(1978) validated five factors particularly important in choosing an exchange rate system:

A. Size of country

Nations that peg their exchange rate tend to be " small

",[1] While nations that prefer flexible exchange rates tend to be " large ". The reasions for this are: a small country is too small to be able to affect the world market prices of traded goods. Whereas a large country is likely to be a price makers in world market. In addition, a large diversified economy that produces a variety of traded and nontraded goods may insulate from exogenous shock so that it can float smoothly. A small undiversified country may find it necessary to insulate disturbance of fluctuation in world prices by pegging.

B. Openness of an economy

Another important factor in choosing an exchange rate system is the openness of an economy.[2] A " closed " economy tends to choose a flexible exchange rate, while an open economy finds it preferable to fix the exchange rate. In a closed economy an exchange rate depreciation(appreciation) offsets the decrease(increase) of the foreign currency price of trade goods and leaves the domestic prices unchanged and maintain the employment in the traded goods sector constant without hurting the equilibrium in the nontraded goods sector. These reduce the cost of adjustment to external disturbances.

C. The development of financial market integratd with

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[1].Small, in this context, is in economic, not geographic, sense. The small country is unable to influence the world price of traded goods. It will be measured by GNP.

[2].The degree of openness depends on whether nontraded goods play an important role in the economy.

world market .

The development of domestic financial market integrated with world markets plays an important role in the choice of an exchange rate system. Under fixed exchange rates, countries cannot pursue independent monetary policies because an expansionary monetary policy will result in a balance of payments deficit. Thus, international captial flows will nullify the goals of money policy. Unlike fixed exchange rates, one of the advantages claimed for flexible exchange rates is the ability of individual nations to pursue independent monetary policy. Hence, countries with well developed financial markets integrated with world markets tend to choose floating rates. Countries with poorly developed financial markets integrated with world markets expect to maintain a par value due to its lack of disturbance of foreign capital flows.[3]

D. Inflation rate.

According to the purchasing power parity hypothesis: P=ep* ; where P=domestic price level, e=domestic currency price of foreign exchange, and P*=price level in the "rest of the world." If the exchange rate is fixed, the domestic inflation cannot diverge from the world inflation rate, or it will result in official settlements deficits or surpluses.

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[3]. In a country with poorly developed financial markets, the exchange rate will be determined only by current flows, not capital account flows.

Therefore, countries with a different inflation rate from those prevailing elsewhere tend to choose a floating exchange rate than to maintain a fixed exchange rate.

E. The pattern of international trade.

A large, diversified economy tends to choose a floating exchange rate, and a country with high geographic concentration in trade is more likely to be a pegger. A country with close trading ties with one major partner does better to peg its exchange rate to its partner's currency.

Heller(1978) examined the theory using the discriminant analysis based on that available data. He found that floatters are supposed to have the following characteristics:

> (1) a large size, (2) a relatively small foreign trade sector, (3) a high degree of international financial integration, (4) an inflation rate that differs from the world average, and (5) a well diversified foreign trade pattern.

Peggers tend to have the opposite characteristics. His analysis also found that a crawling peg country typically resembles peggers instead of floaters.

To the choice of an appropriate peg, the analysis shows that trade shares are very important; countries whose trade takes place largely with one major industral nation tend to peg the currency of that nation. A well-diversified trading pattern tends to peg to a basket of currencies.

3. Principal Issues of The Choices of Exchange Rate Regime in Developing Countries

We have already examined the theory of the choice of an exchange rate regime. Now we want to give an overview of principal issues of the choice of exchange rate regime in developing countries.

Assume a developing country can and should let its currency float independently.(Here, floating is in general cconsidered as a pure float.) A number of authors raise the question as to whether conditions exist in developing countries that would allow exchange rate to float independently, if you assume that the exchange rate is determined by the market. Black(1976) and Branson and Katseli(1981), for example, have argued that certain characteristics which existed in many developing countries excluded floating as a feasible or realistic option. Other authors directly consider whether a fixed or flexible exchange rate regime is better in terms of economic characteristics of developing countries (discussed in section 4).

It is perhaps significant that flexible exchange rates are considered as synonymous with floating rates in most of this literature, and that the studies thus are oriented toward countries with well developed and integrated financial markets. In fact, a flexibie exchange rate does not essentially imply that the exchange rate is determined by the

market forces without government intervention. The authorities may control or directly determine the exchange rate and decide their exchange rate policies. Here we must distinquish the difference between a pure flexible exchange rate(freely floating) and a managed floating exchange rate. A freely floating exchange rate system is a system in which the exchange rates are determined by the market without government intervention. A managed floating exchange rate system is a system in which exchange rates are allowed to change with respect to market conditions, but governments may intervene in the foreign exchange market to stabilize the exchange rates.(May refer to Froyen, Chapter 17)

The feasibility of a floating exchange rate for developing countries depends on: a. the existence of adequate domestic financial markets integrated with world markets; b. the willingness by the authorities to abolish intervention in the exchange market. (Black,1976, P.1) As most developing countries have less developed financial markets and refuse to allow the exchange market to operate freely without government intervention, a floating exchange arrangement is ruled out on the grounds of feasibility or optimality in the process of the choice of a regime. Most developing countries have maintained a fixed peg for their exchange rates management. The problem to be analysized is to peg to a single currency or a basket of currencies. These will be disscussed in detail in the following sections.

4. Characteristics of Developing Countries and The Feasibility of Floating Exchange Rates in Developing Countries

Developing countries have generally tended to choose an adjustable par regime over others. The difference in economic characteristics and institutional framework to developed countries have an important bearing on the choice of an exchange rate regime for developing countries. In this section we shall indicate what these characteristics are and what bearing they have on the adjustment process.

A. Characteristics

1. Most developing countries are price-takers. They are not able to affect world prices of their exports or imports through their exchange rate policies. The production of most developing countries are mainly primary products. Few have highly developed manufactures. Usually a given LDC's primary products are fairly homogeneous, and the export share of each developing country in the international market for its particular export good is in most cases small.

2. The demand for imports is inelastic in developing countries due to little substitutability between imports and

domestic goods. Also, in the short run, the supply of of exports is inelastic because the gestation periods of primary product production is long and the ability to absorb exports domestically is limited.

3. Most developing countries have less developed financial and exchange markets. Financial intermediation is still rudimentary. Financial institutions in developing countries are sparse. There are only a few banks that provide short-term credit; the foreign- exchange market functions mainly through the central bank with domestic financial market and very few foreign exchange brokers and dealers; there is no forward market.

4. Capital mobility is low in developing countries. For developing countries, capital inflows and outflows are often governed by factors other than interest rate differentials due to their insufficiently developed financial markets. Uncertainty concerning political and economic developments has substantial influences on the capital account, even on the short-term capital flows.(Black, 1976, and Crockett and Nsouli, 1977)

We have already indicated the economic characteristics of developing countries above. Following we will examine whether the floating exchange regime is feasible to developing countries. Developing countries should consider their particular economic circumsatances and their policy objectives in deciding what exchange rates strategy to follow.

We have known that adequate development of domestic financial market and a high degree of international financial integration are the premises for a policy of floating exchange rates. Black(1976, P.18 and P.37) and Branson-Katseli(1981, P.394, hereafter cited as B-K; the two sources together) argued that there are in fact two conditions for floating: first, that domestic financial markets of some minimium depth exist; and second, there must be some minimum degree of substitutability between domestic and foreign securities in the portfolios of both domestic and foreign residents. B-K believed that if a developing country satisfies these conditions, then in the short-run its exchange rate is determined by equilibrium conditions in financial markets, and the short-run stability of the exchange rate depends on the overall stability of these markets. With an integrated financial asset market, countries can expect a floating rate to be stable in the short run. B-K argue that if asset markets in a developing country are not integrated with international markets, then supply and demand in the foreign exchange market are determined by current account flows. Therefore the short run stability conditions of the foreign exchange market are the Marshall-Lerner conditions on trade elasticities. The feasibility problem, as put forward by B-K, is that countries with any degree of market power would be unlikely on theoretical grounds to hold these conditions in the near term.

A model developed by Driskill and McCafferty (1980)

illustrate the central point made by B-K; if financial market separation prevents the possibility of speculative capital flows in the short run, then the floating rate will be unstable. The central bank must intervene and "make the market" for foreign exchange, thereby ruling out free floating as a feasible regime.(Also, refer to B-K, 1981, P.395)

we have argued that the exchange and financial markets of developing countries differ from the institutional and market structure of developed countries. The financial institutions and asset markets in most developing countries are not able to function competitively and efficiently. Forward exchange markets are often non-existent, and markets for common stocks, securities, and bills are often poorly developed, thin, or absent. The major financial intermediation is the banking system, which offers a limited range of financial instruments and whose size and structure is small in comparision with that of developed financial systems. (Black, 1976, P.17-18) Thus, the floating may not be feasible in the developing countries.

In some developing countries, the financial intermediaries are concentrated in relatively few hands and would not provide for effective competition in determining interest rates or the exchange rate. Under such circumstances, allowing the exchange rate to float independently is not a realistic option, and it is appropriate that exchange rate is determined by government directly.

Black(1976, P.26) argued that free floating exchange rates would require in many developing countries a substantial further commitment of real resources to the development of adequate asset markets, as well as a willingness by the authorities to allow the exchange market to operate independently.

Floating would require not only the existence of exchange markets but also their potential to become broader, more developed, and better integrated into world market within a favorable policy environment(Black, 1976, P.17). In some developing countries, particularly in Latin America and Asia, such as Brazil, Isral and Lebanon, current transactions have been much liberalized following very rigid restriction and control. Financial reforms have been undertaken that have stimulated competition between financial intermediaries and development of financial intermediaries. Meanwhile, domestic financial markets have been partially opened up to world markets. These policies would be expected to yield significant benefits in the form of substantial reduction of resource misallocation. (Bruno and Sussman, 1979 and Black, 1976; the two sources together) But in most cases, some degree of market segmentation is likely to continue. Some parts of the domestic financial markets may remain controlled or subject to different reserve of liquidity requirements, and the link between foreign and domestical financial markets may be restrained by the regulations and restrictions relating to the

acquisition of foreign assets and the incurring of foreign debt. Nevertheless, there is likely to be sufficient freedom in the exchange market and sufficient number of participants and institutional development that foreign exchange market no longer performs primarily through the central bank. Floating may well constitute, therefore, a feasible exchange rate regime for some developing countries; several developing countries with relatively advanced financial systems, such as Malaysia, Singapore, Nigeria, Israel and Lebanon, have indeed experienced periods in which the exchange rate has floated.(Refer to Black, 1976, P.17, 26 and P.32-36)

5. Flexible Exchange Rate VS. Fixed Exchange Rate

Even though floating exchange rates are difficult to implement by developing countries, floating is not the only form of exchange rate flexibility that can be envisaged. Two questions therefore arise: first, whether flexibile exchange rate reduce the impact of external and internal disturbances. In other worlds, whether it promote adjustment to various shocks and provides economic stability. Second, how can a developing country obtain the appropriate degree and timing of flexibility if it does have these benefits?(Refer to Williamson, 1982, P.53, 54; Black, 1976, P.6-7)

Arguments in favor of a flexible exchange rate for developing countries has been strongly restated by Flanders

and Helpman(1978, hereafter cited as F-H). They consider the exchange rate policy for a small, open country that produces both tradable and nontradable goods and is a price taker for tradable goods. Thus there exist relative prices of traded to nontraded goods in the country. Then the exchange rate matters or at least potentially matters by changing the relative price. The country faces external shocks caused by shifts or fluctuations of world price of tradables, and internal disturbances due to a shift or fluctuation in tastes between traded and non-traded goods. With the flexible exchange rate system the governments determine the money supply, and the exchange rate adjusts perfectly to achieve external balance; with a fixed exchange rate, authorities implement a well-organized policy that equates the money supply to money demand at each point in time to maintain external balance. If all wages and prices are flexible, full employment is maintained; and the choice of an exchange rate regime between two regimes is indifferent. But flexible exchange rates will result in greater price stability than fixed exchange rates in response to external disturbances.(F-H, P.45)

In the F-H model, for a foreign price shock, a policy dilemma can arise in a fixed exchange rate. A monetary policy with the goal of maintaining external balance will result in unemployment; full employment may be achieved only at the cost of a balance of payments deficit or of a highly strained fiscal policy, such as government spending policy and tax

policy.(F-H,1978,P.55) However, for a foreign price shock, flexibility in the exchange rate will be able to ensure full employment, the effect caused by the foreign price shock is offset by a change in the exchange rate. In addition, with a flexible exchange rate system, the increase in demand and decline in supply in the foreign exchange market as a result of the expansionary monetary policy will cause the exchange rate to rise so as to attain full employment and a balance of payments. The converse is also. A flexible exchange rate is always more desirable than a fixed exchange rate in the presence of downward rigid price and wage.(Also, refer to Froyen, 1983, Chapter 17)

F-H concentrate on pursuing a full employment objective in the face of particular types of shocks.(F-H, P.45) Black has emphasized the exchange rate policies for stabilization in response to external and internal shocks. The variance of the domestic relative prices is taken for granted for main measures of stability.(Black, 1976, P.12) The optimal exchange rate policy from a stabilization point of view depends on the type and nature of the shocks that the developing country faces. Black argues that the optimal policy is to peg the exchange rate through reserve use, foreign official borrowing, or both, thus providing some insulation to the domestic economy. The flexible exchange rate policy will serve best to reduce the incidence of domestic relative price fluctuations and resource shifts.(Refer to Black 1976, P.4 and P.5; also

Williamson, 1982, P.40-41)

In contrast to F-H, Lipschitz(1978) considers the exchange rate policy for an economy that is small and only produces tradable goods. He has focused attention on minimizing fluctutations in domestic absorption in response to demand and supply shocks of domestic origin. The results given by Lipschitz are that countries subject to shocks originating solely in demand shock should operate a pure flexible exchange rate(free floating exchange rate) and those subject to shocks originating in supply fluctuations should fix their exchange rate. Where a country is subject to both sorts of domestic shocks, a managed floating exchange rate(flexible exchange rate) is the superior strategy. In his model, he did not ascribe any importance to various sorts of shocks, relative prices level, and the exchange rates. This limitation, he suggests, might weaken the case raised for exchange rate flexibility in response to domestic monetary disturbances.(Refer to Lipschitz, 1978, P.668 and P.669) In Black's model(1976), in contrast, he considered the undesirability of the relative price changes, generated by monetary or price disturbances at home and abroad, with respect to internal and external balance, and argued in favor of a flexible exchange rate.(Black, 1976, P.9 and P..11)

We reached a general conclusion from these simple theoretical analysis above: the optimal exchange-rate regime in the face of various types of disturbances may be one

intermediate between a completely fixed and a completely flexible exchange rate(This is represented by Frankel and Aizenman (1981)). The further policy problem is to determine the appropriate level and type of exchange rate management. Of course, what appropriate level and type of exchange rate management a country should chose should depend on its financial and administrative abilities. But these abilities are determined by the financial institution features and the development of the foreign exchange market. Therefore, it is important to consider the institutional features and the development of the foreign exchange market in determining the appropriate level and the type of exchange rate management.

Foreign exchange markets are insufficiently developed, the foreign exchange market functions mainly through central bank with very few foreign exchange dealers in most developing countries. The monetary authorities directly determine the value of the domestic currency in relation to the intervention currency by adopting a price-setting rule or convention. With an adjustable peg, the price-setting rule applied is relatively straightforward. An alternative is to include in the price-setting rule more continuous reference to some set of variables or indicators, for example, an exchange rate regime using a form of crawling peg or gliding parity.

A crawling peg is where the countries determine and periodically change their exchange rate according to predetermined set of rules.(Blejer and Leiderman, P.133)

The exchange rate policy should also aim at neuatrlising the inflation differentials or obtaining "target" of the authorities. If this target is in excess of inflation rates prevailing elsewhere, the price of domestic currency should be depreciates to offset the inflation differential. The converse is also. It may lead to highly disruptive speculative fluctuations in the supply of and demand for foreign currency under an adjustable-peg regime. Large and infrequent exchange rate devaluations do not prevent the exchange rate from moving out of alignment in the interim and it may add to the uncertainty surrounding prospective economic developments.[4] However, unlike under an adjustable-peg regime, under a crawling-peg system the exchange rate is changed frequently and in small steps according to some predetermined set of rules in order to achieve the government's objectives.(Blejer, 1981, P.137) It can avoid many of the disadvantages inherent in large and abrupt devaluations. For example, in 1975 Israel implemented a crawling peg system with discrete adjustment of 3 to 4 percent and also decided to allow for a minimum period 30 days between each adjustment in order to reduce the profitability of anticipatory speculations.(Bruno and Sussman, 1979)

A crawling peg can be used not only in those countries whose inflation rates are exceptionally high by international

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[4]. Refer to Williamson(1982), P.41, 47, and Enders and Harvey, chapter 16.

standards, but also in these developing countries following conservative monetary policies because they could affect a gradual appreciation of the domestic currency through a crawling peg that is based on an assessment of underlying price and cost trends. In any event, the authorities would be following purchasing power parity closely in the management of exchange rate policy, thereby avoiding trend movement away from an initial value of some real exchange rate indicator. Also, the uncertainty with regard to the exact timing of devaluation is increased, and the profitability of short-run speculation has greatly reduced. Thus, it will prevant destabilizing speculation.[5](Refer to Bruno and Sussman, 1979, P.510 and Blejer, 1981, P.143)

Williamson(1982, P.57) has strongly recommended an overall exchange rate policy dedicated to preserving the constancy of the real exchange rate. He considers that the most efficient way to preserve a constant real exchange rate is to use a crawling peg based on a relative inflation rate indicator. The policy rule for exchange rate managemenmt developed by Black(1976) also designed to stabilize the real effective exchange rate, or REER, index.[6]

This policy rule which sometimes is referred to as

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[5]. Destabilizing speculation is when an increase in the spot exchange rate required an even larger increase in the forward rate to equilibrate the forward market.

[6]. A more explicit theoretical treatment of effective rate indices, see Rhomberg [1975].

"pegging" the REER index has raised some controversy in the literature on exchange arrangements and "optimal" basket. Lipschitz and Sundararajan have claimed that the stabilization of some REER index can be considered an appropriate policy objective--in the case to minimize the variance of the real exchange rate about its equilibrium level over some reference period.(L-S, P.80 and P.82) Whereas a policy of the Black-Branson-Katseli type, which in the limit implies continuous discretionary management of a real exchange rate index, is impractical since the price data are usually available only with a substantial lag. Williamson(1982) argues that the implementation of a reasonable approximation to the policy rule would be possible because inflation rates have a high degree of serial corelation and make it possible to predict current inflation rates. Further, adopting the policy rule practically based on the kind of price indices, such as relative consumer price or wholesale price indices, is questionable because these price indice suffer from several limitations, such as a measure of uncertainty, coverage limitations and the presence of price controls and subsidies, that make estimate of an unambiguous price difficult and many developing countries implement the policy rule not using these simple price indices but available price and cost data.

In addition to these important practical and technical issues, there is general agreement on a theoretical level that an exchange rate management policy oriented toward the

stabilization of some real exchange rate index will be insufficient to maintain external balance. Changes in economic conditions or circumstances that a developing country faces, such as an unpredictable trade shock, may require a change in exchange rate and other policies to affect an alternation in the real exchange rate for external balance adjustment.

Reflecting some of the considerations outlined above, many developing countries have moved to adopt a more active exchange- rate management. Meanwhile, an increasing number of countries' exchange arrangements are based on a link between the domestic currency and a basket of foreign currencies.

6. The Choice of An Appropriate Peg

Having made the case for a flexible exchange arrangement in a developing country, the question remains: To what should a country peg ? Pegging to another currency, or a basket of currencies. The substantive issue is what objectives are to be realized through the choice of a peg and, correspondingly, what problems and circumstances should be considered as relevant for the specificication of these objectives.

Choosing a peg is regarded as a policy instrument to avoid or at least minimize exchange rate fluctuations among foreign currencies . It concerns stabilizing particular target variables to the extent possible from the effects of exchange-rate fluctuations among foreign currencies. A common criterion

is to minimize the effects of exchange rate fluctuations on the economy required a policy of seeking to stabilizing the effective exchange rate index. In principle, the solution to choosing a peg with the objective of stabilizing the effective exchange rate appears straightforward: the country should opt for a weighted basket of currencies.(Refer to F-H, P.391-392)

We have mentioned that the choice of peg is seen as an instrument to realize the given policy objectives. But what are the objectives to be realized and what is the choice of an appropriate peg ? It is these questions that we will discuss in this section. In order to decide the choice of the appropriate peg to realize the policy objectives sucessfully, we should first examine the advantages and disadvantages of the two possible alternative pegs, and then we will review the objectives that have been considered to guide the choice of peg.

(a) Pegging to a single currency

Most developing countries have been in favor of begging to a single major currency, because it is equivalent to maintaining the exchange market policy under adjustable par values. However, the consequences for the country will be different from those under adjustable par values under which the value of the currency will change against the currency to which it pegged.

We will summarize various advantages attributed to pegging to a single currency. First, pegging to the currency of a large trading partner whose foreign exchange rate has a low variance of the effective exchange rate will tend to minimize the exchange rate fluctuations between the developing country and its partner and facilitate trade between the two countries. Also, investment capital flows from abroad may increase. Second, the resource misallocation due to the maintenance of inappropriate exchange rates will probably be much less. Third, if the exchange rate of the industrial country is more stable than the exchange rate of the developing country without pegging, then trade with and investment from the rest of the world will be stimulated. Fourth, stability can be achieved at a minimum administrative cost and difficult with public acceptance. Fifth, a developing country choosing to peg its currency to the partner whose policies are considered to be adequate to the promotion of relatively stable prices will increase confidence in its own currency. Then, the country can benefit from greater trade and more capital flow. Lastly, the high variance contributed by very large devaluations will be mitigated since required devaluations will probably occur more frequently. However, at least four potential disadvantages are seen in a single currency peg. First, the cost of reserve holding may increase due to greater fluctuation of the balance of payments induced by inappropriate foreign exchange rate changes. Second, with

a single currency peg, internal policy may be interfered with by the exchange rate fluctuation, which is independent of government policy. A third drawback to a single currency pegging is the variability of intra-LDC exchange rates resulting from different pegs. A fourth disadvantage is that it may increase import prices. To compensate for the increased uncertainties involved in trade with the developing country, suppliers may be required to increase their product prices. The supplier in the industrial country to whose currency the developing country is pegged has a stronger market position and increases its ability to claim higher profit margins.(B-K, 1981, C-N, 1977 and Black, 1976).

(b) pegging to a basket of currencies

An alternative approach advocates stabilising the effective exchange rate of a currency. An effective exchange rate is defined as a trade-weighted average of the exchange rates of its trading partners. The measure of a country's effective exchange rate takes into account some of the conditions affecting trade of the developing country and will, therefore, reduce distortions and costs arising from movements in exchange rates among other currencies. It will produce less instability of the effective exchange than any single currency peg and also reduce reserve needs. Two disadvantages of this

option is that there will be varying cross-rates among developing countries' currencies, since each will be pegged to a different basket. To overcome this drawback, certain countries have elected to peg the SDR. It will reduce the variance of the effective exchange rate. In addition, such a basket may deter foreign investors due to their unfamiliarity.(Refer to Williamson, 1982, P.42, C-N, 1977, P.131 and Black, 1976, P.10)

We have already examined the advantages and disadvantages of each alternative. Next we need to review the objectives that have been considered to guide the choice of peg in order to decide how a developing country should choose its peg.

(1) Microeconomic objectives

The widespread concern about exchange rate fluctuations under the generalized floating system is that exchange rate uncertainty influences the micro decisions of individuals firms and other agents in the economy who are engaged in international trades because it impose a burden of risk, and therefore costs on them. We know most trade and contracts are denominated in one major currencies or in the trading partner's currency in the short-run for most developing countries. Traders face the risk that payment flows may be

influenced immediately by the exchange rate change if the domestic currency is not pegged to the foreign currency in which the contract is specified. The exposure to risk may be considered as imposing a cost on traders. Some authors think that the choice of peg should be directed to reduce this type of short-run exchange rate risk faced by traders and other transactors. In order to meet this target, a single currency pegging may be preferred, as discussed above. But it is bought at the cost of the macro economic instability. In addition, traders are concerned about the future prices of exports and imports, which will be influenced by exchange rate change through their effect on profitability.[7] Unexpected exchange rate fluctuations will be important elements in generating uncertainty about profit streams and this uncertainty could bias decisions relating to the structure and level of firms' output and investment, therefore, another possible objective of choosing a peg is to reduce the uncertainty about profit streams faced by agents and firms in the traded-goods sector. The source of this kind of risk primarily results from the changes in the bilateral rates against other countries, the choice of peg influences the stability of each bilateral rate.(Refer to Williamson, 1982, P.44, 46 and 48) Results of an analysis by Heller(August, 1978) showed that countries with

[7]. Exchange rate development can affect profitability of suppliers and purchasers because of uncertainty concerning the future actual spot rates.

trade that is highly concentrated in one currency area, such as the French franc, then a peg to this currency will be the most suitsble option. Such a peg will eliminate short-run exchange risk for most transactors and transactions. However, if one foreign currency is not clearly dominant in transactions, it may be preferable to peg to a basket of currencies.

However, even though pegging to a basket of currencies will stabilize the average bilateral exchange rates, each individual bilateral rate will vary. What matters for short-run exchange risk is the relative importance of stability in each bilateral rate. A " Effective Variation " of exchange rates[8] is developed by Frankel. In a simulation analysis using historical exchange rate data, he found the effective variation is minimized by one of the single-currency pegs rather than the basket peg considered. Frankel's results also illustrate that stability of a weighted average exchange rate is not essentially to be preferred to stability of the exchange rate against a single foreign currency. So pegging to a single currency make easier the reduction of a short-run risk.

(2) Macroeconomic Objectives

[8]. It measures the variability of individual bilateral exchange rates and then aggregates across currencies.

Another concern is that exchange-rate fluctuations will influence the attainment of macroeconomic objectives. Countries can choose a peg to reduce undesirable variability in macroeconomic target variables. Exchange rate changes between currencices will affect the behavior of several macroeconomic variables over varying time horizons. A currency depreciation, for example, can be expected to affect the demand for money, aggregate demand, and the levels of prices and output, as well as to induce external and internal relative price shifts that alter the composition of expenditure and output. A currency overvaluation can be expected to undermine exports, to harm agriculture, stimulate imports, destabilize the capital account and often precipitate debt crises, breed protection against imports, promote rent-seeking economies, etc.

The real effective exchange rate provides a measure of external competitiveness. The REER indices refer to an average change in the reporting country's exchange rate against that of all other countries. However, since this hypothetically ideal effective exchange rate cannot be computed, it is necessary to consider simpler indices. There are essentially three such indices: (1) the export-weighted index (2) the import-weighted index, and (3) the bilateral trade index. It is argued that the imported-weighted index is the best appropriation for developing countries among the three

alternatives to the effective exchange rate index.[9]

Crockett and Nsoli computed from available data to examine the divergence of the SDR[10] and of a single currency peg from the import-weighted basket peg for several developing countries and provided some indication as to the relative desirability of pegging to the SDR vis-a-vis a single currency peg on the basis of deviations from the import-weighted basket peg. Several interesting results emerge from Crocket and Nsouli (1977):

> "First, for most countries the SDR peg deviates very little from the import-weighted basket peg. Second, for most countries the SDR basket peg shows a smaller standard percentage deviation than a single currency peg. Third, all the countries that have recently moved to the SDR peg show a smaller standard percentage deviation for the SDR peg than for a single currency peg."

Two conclusions are drawn from the results with regard to pegging to a basket of currencies.(Crockett and Nsouli, 1977) First, if LDCs could reach an effective exchange rate accurately and could stabilise the value of a currency in terms of it, then the developing countries would be able to

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[9].Crockett and Nsouli(1977) argued for import weights, but some other authors argued in favour of trade weights. See Williamson(1982) and Crockett and Nsouli(1977) for the reasons.

[10]. See Williamson(1982),P.58 and P.59 for the reasons of adopting SDR as a peg.

offset the impact of exchange rate changes abroad on their underlying balance-of-payments position. Second, it was demonstrated that a single currency peg usually shows a much greater standard percentage deviation from the import-weighted basket peg than the SDR-basket peg. Hence, the deviation of actual exchange rate from the import-weighted exchange rates of most countries can be reduced by moving from a single currency peg to the SDR basket peg, except for those with very close trading ties with one major industrial country.

So the analysis suggests that, for macroeconomic objectives, pegging to a basket of currencies would generally be preferable to a single-currency peg.

7. Conclusion

In this paper we have examined the theory of the choice of an exchange rate regime and reviewed the principal issues to be considered by a developing country in choosing its exchange rate regime. We claimed that floating is not feasible for developing countries due to their perticular economic characteristics, which are different from those of developed countries, especially due to the underdevelopment of the domestic financial markets and the lack of integration with international markets relative to industrial countries. However, eliminating floating as a feasible or realistic

option does not rule out the possbility of adopting other types of flexible exchange rate arrangement. A proposition advanced from this discussion is that a flexible exchange rate is always more favorable than a fixed exchange rate in the face of foreign price shock.(F-H, 1978, P.55) A general conclusion drawn from these simple theoretical analysises is that the optimal exchange regime in the face of different types of disturbances may be one between a fixed and a fully flexible exchange rate. The problem is to choose an appropriate peg. In choosing the appropriate peg, policy objectives should be our guide.

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THE CHOICE OF EXCHANGE RATE SYSTEM FOR DEVELOPING COUNTRIES

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF ARTS

Department of Economics

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1988

Abstract

This paper provides a comprehensive study on the choice of exchange rate system in developing countries. Since the world's leading industrial countries adopted a system of floating exchange rates in 1973, several studies have concentrated on the problem of how developing countries should adapt their exchange policies. It is widely agreed that the freely-floating exchange-rate system is infeasible for most developing countries, because of factors such as restriction on the foreign exchange, absence of forward exchange markets, and poor development of financial markets and institutions. In addition, it appears that a flexible exchange rate is always as good as, or better than, a fixed exchange rate in response to various types of disturbances. Having concluded that a flexible exchange regime is the most favorable exchange rate regime for developing countries, the question of exchange rate policy is not resolved by just deciding to peg rather than to float. We still need to decide to what to peg. Based on policy objectives as our guide in choosing the apprepriate peg, we conclude that pegging to a single currency is preferable for reducing a short-run risk, and pegging to a basket of currencies is preferable for realizing macroeconomic stability.